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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/656,693	09/04/2003	Bob McGuire	15912/09032	8575
27530	7590	07/26/2005	EXAMINER	
NELSON MULLINS RILEY & SCARBOROUGH, LLP 1320 MAIN STREET, 17TH FLOOR COLUMBIA, SC 29201			GAY, JENNIFER HAWKINS	
			ART UNIT	PAPER NUMBER
			3672	

DATE MAILED: 07/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/656,693	Applicant(s) MCGUIRE ET AL.	
	Examiner Jennifer H. Gay	Art Unit 3672	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 19 is/are allowed.
- 6) ☒ Claim(s) 1-18 and 20-30 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 April 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>9/4/03</u> . | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Drawings

1. The drawings are objected to because surfaces **34a** and **34b** in Figure 2 do not appear to be frustoconical as described in the specification. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

2. Claims 5, 21, and 23 are objected to because of the following informalities:
- Claim 5, “a bottom end” in line 3 should be changed --the bottom end--.
 - Claims 21 and 23 “an independent screwed wellhead” in the body of both claims should be changed to --the independent screwed wellhead--.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1, 5, 10, 11, 23, 28, and 29 are rejected under 35 U.S.C. 102(b) as being anticipated by McLeod (US 4,657,075).

Regarding claims 1, 11, 23, 28: McLeod discloses a flange for use with a screwed wellhead. The flange includes the following features:

- A flange body 44 having a generally annular shape and an axial passageway with an internal diameter at least as large as a passageway through the wellhead 10. The flange further includes a bottom end adapted to be mounted on top of the wellhead where the bottom end includes an annular shoulder for rotatably supporting a lockdown nut 40 for securing the flange to the body of the wellhead.
- A metal-to-metal seal for providing a fluid seal between the flange body and the wellhead. (The examiner notes that the contact surfaces of the body and the wellhead would inherently form a metal-to-metal seal when forced into a tight engagement with each other by the lockdown nut.

Regarding claim 5: The seal would be provided by a first metal contact surface on the bottom end of the flange that cooperates with a second metal contact surface on the wellhead where the surfaces are forced together by the lockdown nut.

Regarding claims 10, 23, 28: As seen in Figure 1, the contact surfaces of the flange and wellhead are frustoconical in shape in an axially downward direction.

Regarding claim 29: While not specifically disclosed, the contact surfaces appear to be offset from an axial plane of the wellhead by 4° to 10°.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

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having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 2, 3, 12-16, 18, 22, 24, 27, and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over McLeod in view of Dallas et al. (US 2004/0231856).

The applied reference has a common inventor and assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art only under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 103(a) might be overcome by: (1) a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not an invention "by another"; (2) a showing of a date of invention for the claimed subject matter of the application which corresponds to subject matter disclosed but not claimed in the reference, prior to the effective U.S. filing date of the reference under 37 CFR 1.131; or (3) an oath or declaration under 37 CFR 1.130 stating that the application and reference are currently owned by the same party and that the inventor named in the application is the prior inventor under 35 U.S.C. 104, together with a terminal disclaimer in accordance with 37 CFR 1.321(c). This rejection might also be overcome by showing that the reference is disqualified under 35 U.S.C. 103(c) as prior art in a rejection under 35 U.S.C. 103(a). See MPEP § 706.02(l)(1) and § 706.02(l)(2).

Regarding claims 2, 3, 12, 22, 24, 27, 30: McLeod discloses all of the limitations of the above claims except for the flange including elastomeric O-rings between the flange body and the wellhead.

Dallas et al. teaches a system similar to that of McLeod. Dallas et al. further teaches the use of elastomeric O-rings **98** between a flange body **18** and an element of a wellhead **50**.

It would have been considered obvious to one of ordinary skill in the art, at the time the invention was made, to have modified the flange of McLeod to include the O-rings taught by Dallas et al. in order to have provided an additional fluid seal between the flange and the wellhead thus ensuring the integrity of the connection.

Regarding claims 13, 14: The wellhead element of Dallas et al. includes a lower abutment surface, upper abutment surface, and a cylindrical, lateral contact surface that contact the flange.

Regarding claims 15, 16: The metal-to-metal seal would be located on the upper and lower abutment surfaces of the wellhead and flange.

Regarding claim 18: The contact surfaces of McLeod appear to be frustoconical.

7. Claims 4, 17, 20, and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over McLeod in view of Smith (US 5,605,194) and Ritter, Jr. (US 4,690,221).

Regarding claims 4, 20: McLeod discloses all of the limitations of the above claims except for the metal-to-metal seal being a metal ring gasket.

Smith discloses a system similar to that of McLeod. Smith further teaches the use of an elastomer ring gasket 28 between a flange and a wellhead.

Ritter, Jr. discloses a wellhead system. Ritter, Jr. further teaches that it is well known to use metal ring gaskets in place of an elastomer ring gasket (5:50-60).

It would have been considered obvious to one of ordinary skill in the art, at the time the invention was made, to have modified the system of McLeod to include a ring gasket between the flange and the wellhead as taught by Smith in order to have provided an additional fluid seal between the flange and the wellhead thus ensuring the integrity of the connection. Further, it would have been considered obvious to one of ordinary skill in the art, at the time the invention was made, to have used a metal ring gasket as taught by Ritter, Jr. in order to have formed a wellhead that was capable of operating at high temperatures and pressures without the problems of elastomer seals.

Regarding claims 20, 21: McLeod discloses a flange for use with a screwed wellhead. The flange includes the following features:

- A flange body 44 having a generally annular shape and an axial passageway with an internal diameter at least as large as a passageway through the wellhead 10. The flange further includes a bottom end adapted to be mounted on top of the wellhead where the bottom end includes an annular shoulder for rotatably supporting a lockdown nut 40 for securing the flange to the body of the wellhead.
- A metal-to-metal seal for providing a fluid seal between the flange body and the wellhead. (The examiner notes that the contact surfaces of the body and the wellhead would inherently form a metal-to-metal seal when forced into a tight engagement with each other by the lockdown nut.

McLeod discloses all of the limitations of the above claims except for securing a blowout preventer to the top of the flange and except for the metal-to-metal seal being a metal ring gasket.

Smith discloses a system similar to that of McLeod. Smith further teaches securing a blowout preventer to the top of a flange.

It would have been considered obvious to one of ordinary skill in the art, at the time the invention was made, to have modified the system of McLeod to include a blowout preventer as taught by Smith in order to have provided a means for retaining wellbore pressure thus reducing the chances of a blowout and wellbore fire.

Smith further teaches the use of an elastomer ring gasket **28** located in an annular groove in a flange and in a wellhead.

Ritter, Jr. discloses a wellhead system. Ritter, Jr. further teaches that it is well known to use metal ring gaskets in place of an elastomer ring gasket (5:50-60).

It would have been considered obvious to one of ordinary skill in the art, at the time the invention was made, to have modified the system of McLeod to include a ring gasket between the flange and the wellhead as taught by Smith in order to have provided an additional fluid seal between the flange and the wellhead thus ensuring the integrity of the connection. Further, it would have been considered obvious to one of ordinary skill in the art, at the time the invention was made, to have used a metal ring gasket as taught by Ritter, Jr. in order to have formed a wellhead that was capable of operating at high temperatures and pressures without the problems of elastomer seals.

8. Claims 6-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over McLeod in view of Garrett (US 4,281,724).

Regarding claim 6: McLeod discloses all of the limitations of the above claims except for a wear bushing for guiding a drill string through the wellhead.

Garrett discloses a system similar to that of McLeod. The wellhead Garrett of McLeod further includes a wear bushing **161**, **263** for guiding a drill string through the wellhead.

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It would have been considered obvious to one of ordinary skill in the art, at the time the invention was made, to have modified the system of McLeod to include a wear bushing as taught by Garrett in order to have provided a means for guiding a drill string or tubular through the wellhead without damaging the top portion of the wellhead system thus reducing the sealing ability of the contact surfaces.

Regarding claims 7, 8: The wear bushing is removably secured to the top of the axial passage of the wellhead by a plurality of locking screws **343** received in threaded bores in the top end of the flange body.

9. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over McLeod in view of Garrett as applied to claims 1 and 6 above, and further in view of Smith.

McLeod and Garrett disclose all of the limitations of the above claims except for securing a blowout preventer to the top of the flange and except for the metal-to-metal seal being a metal ring gasket.

Smith discloses a system similar to that of McLeod. Smith further teaches securing a blowout preventer to the top of a flange.

It would have been considered obvious to one of ordinary skill in the art, at the time the invention was made, to have modified the system of McLeod in view of Garrett to include a blowout preventer as taught by Smith in order to have provided a means for retaining wellbore pressure thus reducing the chances of a blowout and wellbore fire.

10. Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over Smith in view of Ritter, Jr.

Smith discloses an independent wellhead **12** that includes the following features:

- A top end for mating engagement with a bottom end of the a flange **10**
- A ring gasket **28** between the wellhead and the flange to provide a high-pressure seal when the flange is mounted to the wellhead.

Smith discloses all of the limitations of the above claims except for the ring gasket being a metal ring gasket.

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Ritter, Jr. discloses a wellhead system. Ritter, Jr. further teaches that it is well known to use metal ring gaskets in place of an elastomer ring gasket (5:50-60).

It would have been considered obvious to one of ordinary skill in the art, at the time the invention was made, to have modified the wellhead of Smith to use a metal ring gasket as taught by Ritter, Jr. in order to have formed a wellhead that was capable of operating at high temperatures and pressures without the problems of elastomer seals.

11. Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over Smith in view of Ritter, Jr. as applied to claim 25 above, and further in view of McLeod.

Smith and Ritter, Jr. discloses all of the limitations of the above claims except for the flange including a bottom end with an annular shoulder for rotatably supporting a lockdown nut for securing the flange to the wellhead.

McLeod discloses a system similar to that of Smith and Ritter, Jr. McLeod further teaches a flange with an annular shoulder for rotatably supporting a lockdown nut **40** that secures the flange to a wellhead **10**.

It would have been considered obvious to one of ordinary skill in the art, at the time the invention was made, to have modified the system of Smith in view of Ritter, Jr. so that the flange included the annular shoulder and included the lockdown nut of McLeod in order to have included a way for forcing the flange and wellhead into a tight sealing engagement with each other.

Allowable Subject Matter

12. Claim 19 is allowed.

Conclusion

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

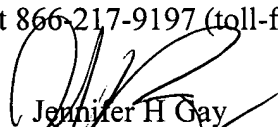
The remaining references made of record disclose various wellhead systems.

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14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jennifer H. Gay whose telephone number is (571) 272-7029. The examiner can normally be reached on Monday-Thursday, 6:30-4:00 and Friday, 6:30-1:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Bagnell can be reached on (571) 272-6999. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Jennifer H. Gay
Patent Examiner
Art Unit 3672

JHG
July 22, 2005